DOCUMENT RESUME

ED 107 041 EC 072 642

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TITLE The Development of the Disability Opinion Surveys and the Social Distance Survey: Preliminary Report.
INSTITUTION Memphis State Univ., Tenn. Dept. of Special Education and Rehabilitation.
PUB DATE Sep 74
NOTE 76p.

EDRS PRICE MF-$0.76 HC-$4.43 PLUS POSTAGE
DESCRIPTORS *Attitudes; Discriminatory Attitudes (Social); Exceptional Child Research; *Handicapped Children; Professional Occupations; *Questionnaires; *Rating Scales; Special Education; Surveys
IDENTIFIERS *Disability Opinion Survey; Social Distance Survey

ABSTRACT

To determine whether individuals project their own locus of control to their attitude toward the disabled, several forms of a disability opinion survey based on J. Rotter's concepts were developed. The Disability Opinion Survey (DOS) (Form IS) was administered to 99 undergraduate and graduate students in special education and rehabilitation; and a demographic information sheet, the Attitude Toward Disabled Persons Scale, the DOS (Forms IS and IST), and the Social Distance Survey (SDS) were administered to 216 Ss consisting of 99 inservice special education teachers and three classes of special education and rehabilitation majors. Findings led to the following preliminary conclusions: that the Internal-External scale of the DOS measured the degree of respect the S held for the internal motivations of disabled persons; that Ss having more professional training in working with disabled persons tended to score toward the internal end of the continuum; that the Special Consideration scale of the DOS measured the tendency of the S to extend special considerations to disabled persons; that the Treatment scale of the DOS tended to tap the S's view of the effectiveness of rehabilitation programs for the disabled; and that the DOS (Forms IS and IST) and the SDS appeared to have much promise in measuring affective dimensions in persons intending to work professionally with the disabled. (GW)

ED107041

PRELIMINARY REPORT

# THE DEVELOPMENT OF THE DISABILITY OPINION SURVEYS AND THE SOCIAL DISTANCE SURVEY

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This report is made possible by a
Faculty Research Grant from the
Faculty Research Committee of
Memphis State University

September, 1974

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# PREFACE

During the Academic year 1973-74, the authors began developing a scale for measuring attitudes toward disabled persons. The initial interest of the authors was actually concerned with Rotter's concept of locus of control and its relation to dimensions of the helping relationship. Out of this initial interest grew the idea of applying Rotter's concepts to the measurement of attitudes toward the disabled.

A Faculty Research Grant was applied for and received from the Faculty Research Committee of Memphis State University for the fiscal year 1974-75. This grant was for the purpose of developing the Disability Opinion Survey and other corollary instruments in order to establish norms and validity data for such instruments. This current report is the first in a series of reports on this grant. This report will concern itself with the gathering of the initial data, further refining of the instruments, and the additional data gathered on the revised instruments. It should be stated that these initial results are extremely encouraging and that future avenues of investigation at this point appear extremely fruitful and numerous.

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## BACKGROUND

### History of the Use of Scale to Measure Attitudes Toward the Disabled

Attitudes scales focusing on disabled persons have been utilized since the 1930's (Yuker, Block and Younng, 1970). Siller (1967) points out that some of the more classic attitude studies have found that measured attitudes of the general public toward the disabled have usually resulted in finding mildly favorable attitudes toward the disabled. He questions, however, whether these have been only verbalized attitudes, while indirect indices have tended to indicate that "...deeper, unverbalized attitudes are frequently more hostile." (p.1) In the 1950's attitude measures toward specific types of disabilities began to appear (Yuker, Block and Younng, 1970). For an intensive review of such studies, the reader is referred to the above sources. Two facts emerge from such a review which relate to this current report: (1) most measures utilized intended to measure attitudes toward the disabled along primarily favorable-unfavorable, or accepting-nonaccepting, dimensions; and (2) such scales, even when focusing in on specific disabilities, dealt primarily with physical disabilities rather than mental and/or social disabilities.

During the Fall, 1973, the authors completed a study of the relationship between Rotter's concept of internal-external locus of control and facilitation ability. The concept of locus of control was derived from Rotter's initial work (1966)

and the concept of facilitation was derived from the work of Carkhuff and Berenson (1967) and Carkhuff (1970). As yet unpublished, this study revealed that no clear-cut relationship between locus of control and facilitation could be shown; but it did indicate that, with training, students could become more facilitative (Greer, Flint and Jenkins, 1973). As the result of this study, the senior author became interested in whether Rotter's concept of locus of control could be applied to the measurement of attitudes toward the disabled. In other words, did an individual's own locus of control influence his view of the locus of control of others, specifically the disabled? This initial interest was the genesis of the work reported here.

## PRELIMINARY DEVELOPMENT OF THE DISABILITY OPINION SURVEY

### The Initial Study

The development of the Disability Opinion Survey has been a truly evolutionary process. It began as a simple exploratory study and has become increasingly more intricate as data is collected, analyzed and the indicated modifications made in the instrument. However, the initial impetus to the present study was a very simple one. The authors were seeking the answer to the question, "Do individuals project their own locus of control to their attitude toward the disabled?". Before proceeding, however, some explanation of Rotter's original concepts seems in order.

Julian Rotter (1966) originally coined the term, locus of control, in reference to his motivational theory. He proposed that persons were primarily internally or externally oriented in relation to their views of their destinies. A person with a high internal locus of control, according to Rotter, believed that he was "captain of his own fate", so to speak. On the other hand, a person with a high external locus of control tends to feel that his fate is determined by situational circumstances external to himself. Rotter developed a twenty-nine item measure of this internal-external locus of control. This instrument consisted of twenty-nine forced-choice statements including four filler items. The key items

had two statements, one of which was internally oriented, the other, externally oriented; and the subject was forced to choose one or the other. The total score was the number of external statements chosen.

Considerable work has been done with Rotter's scale since he published his first validation and standardization work (1966). In a review of the studies using this scale, Fiske and Pearson (1970) concluded that "...in terms of construct validity, the results look quite promising." (pp. 51-52) However, these reviewers point out that according to several studies done with this scale, "externals" have been found to be much more heterogenous than have "internals". They, therefore, suggest that "externals" be sub-divided into those perceiving the external world as benevolent and into those perceiving the external circumstances as malevolent. Fiske and Pearson also point to the fact that Rotter's scale has been found to be little influenced by social desirability response sets. In another review, Sarason and Smith (1971) found Rotter's scale to be too multidimensional and recommended that situation-specific "IE measures" be developed. Parenthetically, it is felt that the development of the Disability Opinion Survey is a situationally specific scale in regard to attitudes toward disabled individuals. Rotter's scale has been explored as a possible instrument for motivating rehabilitation clients (MacDonald, 1972).

In the Spring, 1974, the authors devised two forms of an instrument that used the same forced choice format of Rotter's I-E Scale. The basic difference between this instrument and Rotter's was that the former contained statements regarding the fate and motivations of disabled persons instead of statements concerning individuals in general. The initial two forms A and B are presented in Appendix A. These two forms along with Rotter's I-E Scale were administered to two sophomore English classes and four Special Education classes at Memphis State University. The two English classes were chosen as control groups and students in those classes who were planning to major in Special Education were excluded from the data analysis. The four Special Education classes were chosen to determine how persons intending to work with disabled persons would score on these instruments. These four classes consisted of three undergraduate and one graduate class. The ultimate objective of this study was whether it could be ascertained how persons intending to work with the disabled viewed the disableds' locus of control.

It was felt then, and even more so at present, that to be able to develop such a measurement could have far-reaching effects as far as training professional personnel to work with the disabled is concerned. For example, if a potential professional worker tends to view the disabled as having a high internal locus of control, would he or she tend to deal with

such an individual in a different manner than a professional person viewing the disabled as having a high external locus of control?

This initial data collection consisted of assembling four data variables: (1) semester hours in Special Education courses; (2) scores on Rotter's I-E Scale; (3) scores on the Disability Opinion Survey, Form A (DOSA), and the Disability Opinion Survey, Form B (DOSB). These latter two instruments were scored in the same manner as Rotter's I-E Scale, i.e., the total score was the number of external choices chosen. This data was analyzed by computing the means, standard deviations and intercorrelations for all four variables. The results of this initial data collection are presented in Table I.

Examination of Table I reveals several interesting findings. In regard to the means and standard deviations, the data available regarding hours in Special Education applies only to the Special Education classes, since Special Education majors in the English class were systematically omitted for comparison purposes. Comparing the means and standard deviations for Rotter's I-E Scale with those of the DOSA and DOSB, lower total means were obtained for the latter two experimental instruments. Also, it appears from Table I that the DOSA and DOSB have a much smaller variance than the Rotter Scale. One interesting finding is found in comparing the standard deviations of the DOSA with those of the DOSB. It would appear

TABLE I

ANALYSIS OF THE INITIAL DATA FOR ROTTER'S I-E SCALE, DOSA, DOSB, AND SEMESTER HOURS IN SPECIAL EDUCATION FOR TWO ENGLISH CLASSES AND FOUR SPECIAL EDUCATION CLASSES

| Classes | ENG 1105 | ENG 2105 | SPED 2000 | SPED 3401 | SPED 3512 | SPED 7911 | TOTAL |
|---|---|---|---|---|---|---|---|
| N | 17 | 19 | 37 | 24 | 26 | 8 | 131 |
| Variable | | | | | | | |
| 1. $\bar{X}$ Hrs. in SPED | N/A | N/A | 0.0 | 12.96 | 11.03 | 6.0 | 4.91 |
| S.D. | N/A | N/A | 0.0 | 8.52 | 5.80 | 0.0 | 7.23 |
| 2. $\bar{X}$ I-E* | 9.76 | 10.74 | 11.38 | 10.66 | 11.31 | 10.75 | 10.89 |
| S.D. | 4.10 | 3.72 | 2.81 | 2.85 | 4.05 | 3.84 | 3.44 |
| 3. $\bar{X}$ DOSA** | 5.35 | 7.78 | 5.83 | 7.50 | 6.69 | 7.75 | 6.64 |
| S.D. | 2.32 | 2.42 | 2.27 | 2.28 | 3.11 | 3.28 | 2.66 |
| 4. $\bar{X}$ DOSB*** | 8.41 | 10.37 | 8.67 | 10.08 | 9.73 | 12.12 | 9.56 |
| S.D. | 2.57 | 3.47 | 2.50 | 3.33 | 3.64 | 3.75 | 3.18 |
| 5. Intercorrelations | | | | | | | |
| Hrs.-I-E | N/A | N/A | N/A | .00 | .06 | N/A | .02 |
| Hrs.-DOSA | N/A | N/A | N/A | -.27 | -.24 | N/A | .05 |
| Hrs.-DOSB | N/A | N/A | N/A | -.17 | -.24 | N/A | .06 |
| I-E - DOSA | .29 | -.17 | .29 | -.05 | .35 | .65 | .20 |
| I-E - DOSB | .44 | -.39 | .44 | -.06 | .42 | .77 | .22 |
| DOSA - DOSB | .42 | .62 | .42 | .39 | .70 | .78 | .61 |

*Rotter's I-E Scale
**Disability Opinion Survey, Form A
***Disability Opinion Survey, Form B

Intercorrelations
- Hrs. - I-E = Semester hours correlated with I-E
- Hrs. - DOSA = " " " " DOSA
- Hrs. - DOSB = " " " " DOSB
- I-E - DOSA = Rotter's Scale " " DOSA
- I-E - DOSB = " " " " DOSB
- DOSA - DOSB = DOSA correlated with DOSB

that the DOSB had a significantly greater variance which could account for some of the differences in intercorrelations with other variables when compared with the DOSA. An examination of the Intercorrelation section of Table I will reveal that with the exception of two cases (Hrs.-DOSA for SPED 3401 and 3512) the DOSB correlated higher with the other variables than the DOSA.

The Intercorrelation section of Table I reveals both some encouraging and discouraging findings. First, the correlations between both forms of the DOS and Rotter's I-E, although low, were significant at the .05 level for the total N. Also, with the exception of two classes (ENG 2105 and SPED 3401) the correlations between both forms of the DOS and Rotter's I-E were moderately high and in the expected direction. The correlations between DOSA and DOSB were significant in almost every case; however, if these correlation coefficients are interpreted as alternate form reliabilities (which they are), they would tend to be somewhat low. The correlation coefficient for the two forms for the total N was too low to be a high reliability (Guilford, 1956). Perhaps the most discouraging fact concerning the intercorrelations in Table I are the low correlations between both forms of the DOS and hours in Special Education. These correlations are not significant in any case. As referred to in the above paragraph, the overall high correlation coefficients obtained for DOSB could be accounted for by its consistently higher variance as reflected in its greater

standard deviations. As is known, the greater the heterogeneity of variance, the more likely the correlation with other variables.

Since many questions were left unresolved in relation to this initial data analysis, it was decided that further analysis was needed. The avenue of further analysis chosen in this case was factor analysis. The total score of each subject on the Rotter I-E Scale was factor analyzed with his responses to each item on both forms of the DOS yielding an analysis of 58 subjects on 43 variables. The 42 items of the DOS forms A and B chosen were the non-filler items. The 58 subjects chosen consisted of the subjects in the initial sample who were in the more advanced classes in Special Education and Rehabilitation (SPER 3401, 3512 and 7911). The results of this analysis are presented in Table II. As can be seen in Table II, this factor analysis resulted in four factors. It should be remembered that the authors were searching for items on the DOS which related directly to Rotter's concept of internal versus external motivation. The subjects' I-E scores loaded highest (-.65) on Factor I. The authors chose the criterion of a loading of .45 (ignoring the sign) or better as a significantly high loading. Examining the results of this factor analysis, the items loading high on each factor were judged in relation to their apparent content commonality. This latter selection criterion was, admittedly, somewhat subjective. Through this selection process, Factors I and III were found to satisfy the above stated criteria most satisfactorily. Items

TABLE II

RESULTS OF A FACTOR ANALYSIS OF 131 SUBJECTS ON 43 VARIABLES*



| Variable | Scale | Item No. | Factor I | Factor II | Factor III | Factor IV |
|---|---|---|---|---|---|---|
| 1 | | | | | | |
| 2 | DOSA | 2 | -.65 | .07 | -.09 | .00 |
| 3 | " | 3 | -.21 | .06 | .44 | .35 |
| 4 | " | 5 | -.09 | -.37 | -.26 | -.21 |
| 5 | " | 6 | -.35 | .16 | .61** | -.22 |
| 6 | " | 7 | .23 | -.47 | -.05 | -.21 |
| 7 | " | 9 | .37 | .13 | -.21 | -.18 |
| 8 | " | 10 | .19 | -.17 | -.27 | -.14 |
| 9 | " | 11 | .27 | .15 | -.20 | .26 |
| 10 | " | 13 | -.04 | -.04 | -.61** | .00 |
| 11 | " | 14 | -.06 | -.50 | .03 | .08 |
| 12 | " | 15 | .30 | .29 | -.19 | .12 |
| 13 | " | 16 | .00 | -.60 | -.08 | -.10 |
| 14 | " | 18 | -.12 | .25 | .01 | .38 |
| 15 | " | 19 | -.12 | -.13 | .56** | -.12 |
| 16 | " | 20 | .53** | .13 | -.15 | -.11 |
| 17 | " | 22 | .04 | -.27 | -.06 | -.01 |
| 18 | " | 23 | .32 | -.00 | .03 | .36 |
| 19 | " | 24 | .12 | -.20 | -.37 | -.13 |
| 20 | " | 25 | -.08 | .02 | .16 | .06 |
| 21 | " | 26 | .12 | .36 | .10 | -.22 |
| 22 | DOSB | 2 | -.64** | .00 | .10 | .16 |
| 23 | " | 3 | -.07 | -.04 | .28 | .57 |
| 24 | " | 4 | -.49** | .01 | .05 | .30 |
| 25 | " | 5 | -.03 | .00 | .12 | -.27 |
| 26 | " | 7 | -.21 | .05 | .03 | .56 |
| 27 | " | 8 | -.33 | .31 | .51** | .01 |
| 28 | " | 9 | .04 | .51 | -.17 | .16 |
| 29 | " | 10 | .41 | .06 | -.09 | -.00 |
| 30 | " | 11 | -.12 | .10 | .00 | .46 |
| 31 | " | 12 | .11 | .12 | -.51** | -.05 |
| 32 | " | 13 | -.19 | -.09 | -.80** | .04 |
| 33 | " | 15 | -.13 | -.49 | -.18 | -.02 |
| 34 | " | 16 | .30 | .23 | .28 | .12 |
| 35 | " | 17 | .09 | -.13 | .30 | .20 |
| 36 | " | 18 | .05 | -.56 | .09 | .16 |
| 37 | " | 19 | .01 | .20 | .60** | .00 |
| 38 | " | 20 | .24 | .03 | -.20 | -.50 |
| 39 | " | 21 | -.30 | .58 | .07 | -.22 |
| 40 | " | 22 | -.27 | .07 | .04 | -.56 |
| 41 | " | 23 | .14 | -.19 | -.29 | -.28 |
| 42 | " | 24 | .23 | .48 | .17 | .09 |
| 43 | " | 25 | -.76** | .10 | .08 | -.08 |
| | | | -.43 | .01 | .18 | .15 |

*With the exception of Variable 1 (Rotter's I-E Scale Score), each variable represents one item from the DOSA and DOSB.

**High loadings on I-E and SC factors.

loading high on Factor I, consisting of Items 19 and 26 from the DOSA and items 3 and 24 from DOSB, were judged to be measures of perceived internal versus external motivations of disabled individuals. Factor III, consisting of items 5, 11 and 18 from the DOSA and items 7, 11 and 18 from the DOSB, was judged to measure special considerations to be extended to the handicapped. Without elaborating too much, Factor II appeared to relate to the disabled person's relationship to other persons, particularly helping professionals; while Factor IV had items loading high that appeared to have no commonality except that several of them related to drug and alcohol use. The authors selected the items loading high on Factors I and III for further investigation.

The collection and analysis of the initial data indicated that the forced choice format of the instrument left something to be desired, particularly in relation to the variance of the variables of interest.

Therefore, it was decided that the format of the original two forms of the Disability Opinion Survey be changed from that of a forced choice to a Likert-type scale. To demonstrate this procedure, the following example is given:

Item 12 of the DOSB loaded high on Factor III (the Special Consideration factor). Item 12 read as follows:

12. a. A non-disabled man who marries a woman with polio should be extremely tolerant and patient.

b. A non-disabled man who marries a woman with polio should not be expected to be any more tolerant or patient than any other husband.

These two statements were then separated into individual statements and placed in different positions on the Likert-type Disability Opinion Survey, Form A. This latter instrument is contained in Appendix B. This procedure yielded a 20-item instrument with two sub-scales. The first sub-scale, consisting of eight items, measured perceived locus of control in disabled persons and is from here on referred to as the I-E scale. The second sub-scale, consisting of 11 items, measured the special consideration that the subject felt should be extended to the disabled and is termed the SC scale. It may be noted that the SC scale has an uneven number of items and that if the procedure of developing the Likert form of this scale outlined above were strictly followed, this could not be. The reason for this is that one of the alternative choices from the original DOSA (item 5a) was deleted from the Likert-type form, of the Disability Opinion Survey.

## DATA COLLECTION AND ANALYSIS OF THE LIKERT FORM OF THE DISABILITY OPINION SURVEY

In the Spring of 1974, the Likert form of the Disability Opinion Survey was administered to three Special Education and Rehabilitation classes at Memphis State University. Two classes were undergraduates and one class was a graduate extension course. In all, ninety-nine (99) subjects were involved in this sample. In addition to the Likert form of the Disability Opinion Survey (to be referred to from this point on as the DOS-IS), it was decided that other variables should be collected on this sample for standardization and concurrent validation purposes. The variables chosen were: age, sex, hours in special education and rehabilitation courses, along with a Social Distance Survey devised by the authors and the Attitude Toward Disabled Persons (ATDP) scale devised and standardized by Yuker, Block and Younng (1970). The Social Distance Survey was similar in format to one devised by Siller (1967), but based on the theory of Goffman (1970). This scale is contained in Appendix C and consists of fourteen categories of people. For each category the subject was asked to check the closest relationship they would have with such a person along a five-point continuum ranging from "would live in the same neighborhood" to "would consider marriage to such an individual". The categories of persons chosen were of two types: the discredited (persons with obvious stigmas, such

as the physically handicapped), or the discreditable (persons with hidden stigmas, such as an ex-mental patient). This scale, then, divided into two sub-scales, the discredited (Dd) scale, and the discreditable (Db) scale.

The data collected on these three classes were analyzed through the use of the Statistical Language Processor (SLAP), a computer program at the Memphis State University Computer Center which has the capabilities of analyzing data in a number of ways. The analyses chosen for this particular study were: (1) computing the means and standard deviations for all variables for the total group (N=99) and for the individual classes within the total group; (2) computing intercorrelations for all variables involved again for the total group; and (3) computing one-way analyses of variances for the differences in means for the three classes for the variables of age, hours in special education and rehabilitation, ATDP scores, the two sub-scale scores for the DOS-IS, and finally the two sub-scales of the Social Distance Scale (the Dd scale and the Db scale). The results of these analyses are presented in Tables III-VI.

## ANALYSIS OF THE INITIAL DATA COLLECTED USING THE LIKERT-TYPE DISABILITY OPINION SURVEY DURING SPRING, 1974

Table III presents the analysis of the means and standard deviations of the three classes with the revised Likert-type version of the Disability Opinion Survey. When compared with the means and standard deviations presented in Table I (particularly those for DOSA and DOSB), it can be seen that new Likert-type scales derived from the factor analysis of DOSA and DOSB have a proportionately higher degree of variance. One class (SPER 7401) varies from the other two in regard to age, also, another of the three classes (SPER 3401) varies from the others in regard to credit hours completed in special education and rehabilitation. This latter class has a greater amount of variance on the two sub-scales of the DOS-IS. These features of Table III are mentioned here because they will have some influence on the interpretations of the other statistical analyses completed on this data. It would seem superfluous, at this point, to spend any more space elaborating on the data in Table III, since the further statistical analyses to be discussed have much more bearing on the validity of this new scale.

Table IV presents the intercorrelations of the variable under study here. The data presented in Table IV contains the intercorrelations for the total group. Six of these correlation

TABLE III

MEAN AND STANDARD DEVIATIONS FOR THE TOTAL GROUP AND INDIVIDUAL CLASSES ON THE LIKERT-TYPE DISABILITY OPINION SURVEY AND OTHER VARIABLES UTILIZED IN THE STUDY, SPRING 1974

| | Total Group N=99 | | SPER 7401 N=31 | | SPER 3901 N=35 | | SPER 3401 N=33 | |
|---|---|---|---|---|---|---|---|---|
| Variables | Mean | S.D. | Mean | S.D. | Mean | S.D. | Mean | S.D. |
| 1. Age | 26.85 | 8.56 | 33.00 | 10.22 | 23.11 | 5.46 | 25.06 | 6.29 |
| 2. Hrs. in SPER | 9.13 | 9.27 | 7.74 | 11.11 | 6.88 | 6.07 | 12.81 | 9.33 |
| 3. ATDP | 111.07 | 17.48 | 101.67 | 14.30 | 112.34 | 18.58 | 118.54 | 15.24 |
| 4. SC | 35.29 | 11.89 | 34.67 | 10.86 | 35.02 | 12.11 | 36.15 | 12.85 |
| 5. IE | 45.36 | 7.78 | 48.61 | 6.05 | 42.37 | 7.41 | 45.48 | 8.53 |
| 6. Dd SDS | 3.48 | 1.04 | 3.29 | 1.12 | 3.84 | .77 | 3.26 | 1.13 |
| 7. Db SDS | 3.04 | .95 | 2.66 | 1.04 | 3.50 | .78 | 2.90 | .85 |

ATDP - Attitude Toward Disabled Persons (Higher score indicates a more favorable attitude toward disabled)
SC - Special Consideration Scale, Likert-type Disability Opinion Survey (higher the score, the less prone to extend special considerations)
IE - Internal-External Scale, Likert-type Disability Opinion Survey (higher the score, the more internal the perception of the disableds' orientation)
Dd SDS - Discredited Scale, Social Distance Survey (higher the score, the closer the desired relationship)
Db SDS - Discreditable Scale, Social Distance Survey (higher the score, the closer the desired relationship)

NOTE: The above abbreviations (ATDP, et al.) will be used in all following tables.

TABLE IV

INTERCORRELATIONS OF THE LIKERT-TYPE DISABILITY OPINION SURVEY WITH RELEVANT VARIABLES IN THE INITIAL DATA COLLECTION (SPRING, 1974)
TOTAL GROUP
N = 99

| | Age | Hrs..in SPER | ATDP* | SC* | IE* | Dd* | Db* |
|---|---|---|---|---|---|---|---|
| 1. Age | 1.00 | -.16 | -.18 | .00 | .24* | -.04 | -.14 |
| 2. Hrs. in SPER | | 1.00 | .12 | -.08 | -.10 | -.10 | -.09 |
| 3. ATDP | | | 1.00 | .45** | .13 | .18 | .36** |
| 4. SC | | | | 1.00 | .15 | .05 | .22** |
| 5. IE | | | | | 1.00 | -.13 | -.26** |
| 6. Dd | | | | | | 1.00 | .66** |
| 7. Db | | | | | | | 1.00 |

*Abbreviations used in Table III apply here

*r = .20 is significant at the .05 level
**r = .26 is significant at the .01 level

coefficients were found to be significant. It should be pointed out here that the demographic variable, sex, used in this data collection, was not reported since all samples had a disproportionately high number of females.

Among the six significant correlations contained in Table IV, it is seen that the IE sub-scale of the DOS-IS correlated significantly with only one other variable, age. This would tend to indicate that this sub-scale might be tapping one aspect of attitude that is mediated by age. Hours in Special Education and Rehabilitation did not correlate with any other variables; however, it should be remembered that this sample contained only subjects who were majoring in Special Education and, therefore, due to the homogeneity of the group, such a finding is not surprising. The high correlation between the ATDP and the SC sub-scale of the Disability Opinion Survey would indicate that the latter was an index of the favorability of subjects' general attitude toward the disabled. It is most difficult, however, to explain the high and significant correlation between the ATDP and the Db sub-scale of the Social Distance Survey. If this latter instrument truly reflected Goffman's theory, i.e., had adequate construct validity, a high and significant correlation would have been found between the ATDP and the Dd sub-scale, rather than the Db scale. Although the correlation between the ATDP and the Dd sub-scale was almost significant (.18), it was not nearly as strong as the relationship between

the ATDP and the Db sub-scale (.36). Either the ATDP measures a more generalized attitude toward the "misfortunate" in general; or, the sub-scales of the Social Distance Survey are measuring dimensions of attitudes different from the theoretical assumptions upon which it was constructed. The correlation between the SC sub-scale of the DOS and the ATDP and the Db sub-scale of the Social Distance Survey appears to be involved in the above discussion. From all of this it would appear that the ATDP, the SC sub-scale of the DOS, and the Db sub-scale of the Social Distance Survey are measuring some generalized favorability toward misfortunate persons.

In contrast to the above findings, the IE sub-scale of the DOS is found to correlate positively with age (.24) and negatively with the Db sub-scale of the SDS. Since the categories on the SDS from which the Db sub-scale was derived consist largely of persons having more social types of stigmas, it would seem that the IE scale is measuring a more conservative, less compassionate dimension of attitude toward misfortunate persons. Although there appeared to be different types of relationships between the Dd and Db sub-scales of the Social Distance Survey with other variables in this study as is seen in Table IV, a very high and significant correlation (.66) was obtained between these two sub-scales.

To this point, the analysis of the initial data collected using the Likert-type form of the Disability Opinion Survey has concerned intercorrelations among the different variables

studied. In this analysis, subjects' performance on one variable have been examined in light of their performance on other variables. Another approach to this analysis would be to analyze the performance of the groups used in this data collection and to compare the performance of each group with the other. This was done using one-way analysis of variance and analyzing the data in regard to the differences between the three classes.

The three classes (one graduate and two undergraduate) used in this data collection were studied in regard to their performance on the same variables used in the intercorrelation study. The graduate class was an extension class in a somewhat rural area and was comprised of persons much older and with more conservative backgrounds than is typically found on a university campus. This class was chosen for these reasons to compare with the two on-campus undergraduate classes. Tables Va-g contain the results of the one-way analysis of variance of these three classes on the variables age, hours in Special Education and Rehabilitation, ATDP score, the two sub-scales of the Disability Opinion Survey and the two sub-scales of the Social Distance Survey. As can be ascertained from Table Va, the graduate group was significantly older than the undergraduate classes. In regard to credit hours in Special Education and Rehabilitation, one of the undergraduate classes proved to be significantly different than either the

graduate extension class or the other undergraduate class. This particular finding, as will be seen presently, presents some difficulty as to the exact meaning of some of the findings.

Table Vc presents the results of the analysis of variance of the three classes with regard to their scores on the Attitude Toward Disabled Persons (ATDP). One of the undergraduate classes (SPER 3401) had a significantly higher score than the other undergraduate class and also the graduate extension class. However, on closer examination, it can be seen that both undergraduate classes had a significantly more favorable attitude toward the disabled. If reference is made back to Table Vb, it may also be seen that the class, SPER 3401, had a significantly higher number of credit hours in Special Education and Rehabilitation. This would tend to show that courses in Special Education and Rehabilitation do tend to increase the favorability of one's attitudes toward the disabled. However, caution here is urged, because data to be presented later in this report will indicate that such a clear-cut relationship is not as simple as it might appear.

Table Vd presents an analysis of variance of the three classes on the Internal-External sub-scale of the Disability Opinion Survey. The difference between the three classes was significant at the .01 level. As indicated in the footnote

TABLE Va

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE OF CHRONOLOGICAL AGE

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 869.56 | 2 | 15.36 | .00 |
| Within | 56.61 | 96 | | |

| Group(Classes) | Mean Age |
|---|---|
| 3401 | 25.06 |
| 3901 | 23.11 |
| 7401 | 33.00 |

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TABLE Vb

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE OF HOURS IN SPECIAL EDUCATION AND REHABILITATION

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 296.23 | 2 | 3.55 | .03 |
| Within | 83.47 | 96 | | |

| Group(Classes) | Mean Hrs. in SPAR |
|---|---|
| 3401 | 12.81 |
| 3901 | 6.88 |
| 7401 | 7.74 |

TABLE Vc

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE ATTITUDE TOWARD DISABLED PERSONS (ATDP)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 1665.00 | 2 | 4.09 | .01 |
| Within | 404.22 | 96 | | |

| Group(Classes) | Mean ATDP |
|---|---|
| 3401 | 118.54 |
| 3901 | 112.34 |
| 7401 | 101.67 |

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TABLE Vd

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE INTERNAL-EXTERNAL SCALE, DISABILITY OPINION SURVEY (IE)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 334.78 | 2 | 4.39 | .01 |
| Within | 76.12 | 96 | | |

| Group(Classes) | Mean IE |
|---|---|
| 3401 | 45.48 |
| 3901 | 42.37 |
| 7401 | 48.61 |

to Table III, the higher the I-E score, the more the subject views the fate of the disabled as internally determined. In other words, it is up to the disabled person's own desires, motivations, etc., as to whether he will "make the grade." As shown in Table Vd, the older, more conservative graduate class tended to be "more internal" than the undergraduate classes.

Table Ve contains the results of the analysis of variance of the three classes on the Special Consideration sub-scale of the DOS. The difference between the three classes on this sub-scale was not significant. As is also indicated in the footnote on Table III, the higher the score on the SC sub-scale, the less prone the subject is to extend special "favors" to the disabled. Since the difference between the classes on this sub-scale was not significant, no conclusions can be made regarding this sub-scale.

Tables Vf and Vg contain the analysis of variance of the difference between the three classes on the Discredited and the Discreditable sub-scales of the Social Distance Survey. As is shown, these differences were significant with regard to <u>both</u> sub-scales. It will also be seen that the graduate extension class did tend to be more conservative, since on both sub-scales they, as a group, indicated the most distant desired social relationship with the disabled, either of the discredited or the discreditable type. It is also interesting to note

TABLE Ve

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE SPECIAL CONSIDERATION SCALE, DISABILITY OPINION SURVEY (SC)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 2.56 | 2 | .01 | .98 |
| Within | 156.87 | 96 | | |

| Group(Classes) | Mean SC |
|---|---|
| 3401 | 36.15 |
| 3901 | 35.02 |
| 7401 | 34.67 |

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TABLE Vf

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE DISCREDITED SCALE, SOCIAL DISTANCE SURVEY (Dd)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 278.67 | 2 | 2.82 | .04 |
| Within | 98.47 | 96 | | |

| Group(Classes) | Mean Dd |
|---|---|
| 3401 | 3.26 |
| 3901 | 3.84 |
| 7401 | 3.29 |

TABLE Vg

ONE-WAY ANALYSIS OF VARIANCE FOR THE THREE CLASSES
ON THE VARIABLE DISCREDITABLE SCALE, SOCIAL DISTANCE SURVEY (Db)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 679.37 | 2 | 7.68 | .00 |
| Within | 88.37 | 96 | | |

| Group(Classes) | Mean Db |
|---|---|
| 3401 | 2.90 |
| 3901 | 3.50 |
| 7401 | 2.66 |

that one of the undergraduate classes, SPER 3901, indicated the most favorable desired social relationship on both sub-scales. This class was a class in the Introduction to Rehabilitation and the Helping Professions. The problems of all types of disabilities, adults and children, are studied in this class; therefore, this is some supporting evidence for the validity of these two sub-scales.

From the initial data collection for the Likert-type scale of the Disability Opinion Survey and the Social Distance Survey, it appeared that both of these instruments have considerable promise for measuring certain dimensions of attitudes toward the disabled in general and toward different types of disabling conditions. This initial study produced several significant correlations and supported the fact that these instruments could differentiate groups having different characteristics in regard to age and amount and level of training.

Between the time the above data was gathered and the time it was analyzed, the authors of this study refined the Disability Opinion Survey. It was conjectured that since the two original sub-scales, the Special Consideration and the Internal-External, tended to be so promising in these initial results, another sub-scale should be added to this instrument. This third sub-scale was designed to measure the subject's attitude toward the effectiveness of treatment programs for the disabled. This latter scale was considerably different from the other two, since it was derived primarily from conjecture and not statistically as were the other two, having

been derived from a factor analysis. However, the creation of this third, Treatment, sub-scale may have been a case of serendipity. Not only did it lengthen the original instrument by seven items (thus adding to the instrument's overall reliability); these items appear to have acted as filler items and may have contributed to increasing the other sub-scales' validity. The advantages of this third sub-scale were not, however, apparent at the time of its construction; but were discerned after considerable data had been collected using this revised form of the DOS. This revised form of the DOS may be found in Appendix C.

## A STUDY OF 216 SUBJECTS USING THE ATDP, THE DISABILITY OPINION SURVEY (FORM IS), THE DISABILITY OPINION SURVEY (FORM IST) AND THE SOCIAL DISTANCE SURVEY

During the summer of 1974, 216 subjects were administered the Information Sheet (a form devised to collect pertinent demographic data on each subject), the Attitude Toward Disabled Persons Scale, the Disability Opinion Survey (Form IS), the Disability Opinion Survey (Form IST), and the Social Distance Survey. The original Likert-type Disability Opinion Survey is designated as Form IS because it contains the Internal-External Scale and the Special Consideration scale; the "I" standing for the former and the "S" standing for the latter. The revised form of the Disability Opinion Survey is designated Form IST because it contains the Internal-External Scale, the Special Consideration Scale, and the Treatment Scale, thus the letters "IST." This portion of the study constitutes the actual standardization and validation of the Disability Opinion Survey (Form IS), the Disability Opinion Survey (Form IST) and the Social Distance Survey. The actual scoring procedures for these instruments will be found in the Appendix.

This sample of subjects consisted of 99 in-service Special Education teachers and three classes of Special Education and Rehabilitation majors. One of these classes was a graduate class and the other two were undergraduates. The group of in-service teachers consisted of relatively untrained

personnel, since approximately 58% of this group reported having had no courses in Special Education. However, some of this group had degrees in Special Education and this made the overall mean of the group higher than what it would have otherwise been. For example, eleven (11) members of this group reported having thirty (30) or more hours in Special Education, while 72% had three hours or less. All of this seems important to point out since the following report is based on the comparison of the Disability Opinion Survey and the Social Distance Survey results when used with a relatively untrained group and a group that is undergoing training.

Table VI contains the intercorrelations of this sample between the variables studied. In order to approach the interpretation of these intercorrelations in a meaningful and systematic fashion, each variable will be discussed in terms of its correlation with other variables, beginning with the variable, age. Conclusions concerning the relationship of each variable will be listed at the end of the discussion of that variable. Reference should always be made to Table VI.

TABLE VI

INTERCORRELATIONS OF THE LIKERT FORMS OF THE DISABILITY OPINION SURVEY WITH OTHER VARIABLES IN THE SECOND MAJOR DATA COLLECTION, SUMMER, 1974

TOTAL GROUP N = 216

| | Age | Hrs. In SPER | ATDP | SC(IS) | IE(IS) | SC(IST) | IE(IST) | TR(IST) | Dd | Db |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Age | 1.00 | .03 | -.04 | .03 | -.11 | .05 | -.05 | -.04 | -.09 | -.20** |
| 2. Hrs. in SPER | | 1.00 | .02 | -.04 | .21** | -.11 | .17* | .07 | .12 | .07 |
| 3. ATDP | | | 1.00 | .09 | .01 | .13* | .04 | .33** | .26** | .18** |
| 4. SC(IS) | | | | 1.00 | -.36** | .76** | -.27** | -.05 | -.07 | -.16* |
| 5. IE(IS) | | | | | 1.00 | -.34** | .83** | .19** | .24** | .27** |
| 6. SC(IST) | | | | | | 1.00 | -.24** | -.02 | -.02 | -.14* |
| 7. IE(IST) | | | | | | | 1.00 | .16* | .25** | .27** |
| 8. TR(IST) | | | | | | | | 1.00 | .32** | .24** |
| 9. Dd | | | | | | | | | 1.00 | .71** |
| 10. Db | | | | | | | | | | 1.00 |

SC(IS) - Special Consideration Scale, Disability Opinion Survey Form IS
IE(IS) - Internal-External Scale, Disability Opinion Survey Form IS
SC(IST) - Special Consideration Scale, Disability Opinion Survey, Form IST
IE(IST) - Internal-External Scale, Disability Opinion Survey, Form IST
TR(IST) - Treatment Scale, Disability Opinion Survey, Form IST

*r = .13 is significant at the .05 level
**r = .18 is significant at the .01 level

AN ANALYSIS AND INTERPRETATION OF THE INTERCORRELATIONS OF THE TWO FORMS OF THE DISABILITY OPINION SURVEY AND THE SOCIAL DISTANCE SURVEY WITH OTHER VARIABLES FOR 216 SUBJECTS

Hours in Special Education and Rehabilitation

As is seen in Table VI, hours in Special Education and Rehabilitation correlated significantly with both IE sub-scales of the Disability Opinion Survey. Both of these correlations were relatively low, but were positive and significant. This would tend to indicate that subjects with more training in Special Education and Rehabilitation, as a group, were prone to view the locus of control of disabled persons as being more internal than did subjects with less training.

Age

Age correlated significantly with only one variable, the Discreditable sub-scale of the Social Distance Survey. This correlation was relatively low, but was significant and negative. This indicates that older subjects tend to feel less comfortable with persons with discreditable (hidden) stigmas.

Attitude Toward Disabled Persons

The Attitude Toward Disabled Persons scales correlated significantly with four variables, the SCB sub-scale, the TRB sub-scale, and the two sub-scales of the Social Distance Survey. Three of these correlations were relatively low even though they were significant. The moderate, positive correlation

between the ATDP and the TRB sub-scale of the Disability Opinion Survey would tend to indicate that this latter sub-scale tended to measure attitudes along a general favorable-unfavorable continuum. This interpretation is based on the assumption that this is what the ATDP itself tends to measure. Data gathered in regard to analysis of variance between the various groups used in this sample will tend to support this assumption. It may also be stated that due to the positive correlations between the other three variables, it may also be claimed that these variables are also tapping a general, favorable-unfavorable dimension.

Special Consideration Sub-Scales

Since the items on the Special Consideration sub-scales are identical on both forms of the Disability Opinion Survey, their intercorrelations with other variables will be discussed together. The Special Consideration sub-scales correlated with one another highly and positively (.76). Although this is still relatively low as far as reliability is concerned, it does indicate a substantial degree of agreement between the two sub-scales. An examination of Table VI reveals that with one exception, the two scales correlate significantly with the same variables. These correlations for the SCA are: with IEA, -.36; with IEB, -.27; with the Db sub-scale, -.16. These correlations for SCB are: with ATDP, +.13 (the only correlation of SCB which did not coincide with a correlation of the SCA);

with IEA, -.34; with IEB, -.24; and with the Db sub-scale, -.14. From these intercorrelations it would appear that the Special Considerations sub-scale is a somewhat independent variable with only one positive correlation with another variable (SCB with ATDP), and relatively high negative correlations with other variables, i.e., IEA, IEB and Db. It appears that the Special Considerations scale is measuring a continuum of attitudes ranging from the "bleeding heart" attitude at the one end to the "hard nosed" attitude at the other. The relatively high, negative relationship between this variable and the Internal-External sub-scales tends to indicate that persons on the one extreme on one of these scales would tend to be on the other extreme of the other scale.

Internal-External Sub-Scales

Since the individual items on the two Internal-External sub-scales are identical on both forms of the Disability Opinion Survey, their intercorrelations with other variables will also be discussed together. Examination of Table VI indicates that these two sub-scales have a rather high degree of inter-reliability (.83). They also appear to correlate almost identically with other variables, except that the correlations of the IEB are consistently lower than those of the IEA. As was indicated in regard to the Special Consideration Scales, both IE sub-scales correlate considerably high and negative with

those sub-scales (-.36, -.34, -.27 and -.24 respectively). Both IE scales, however, correlate significantly and positively with hours in Special Education and Rehabilitation (.21 and .17, respectively). Both the IEA and IEB correlate positively with the Treatment sub-scale (TRB), the Dd sub-scale and the Db sub-scale (.19, .24, and .27 for the IEA respectively and .16, .25, and .27 for the IEB respectively). From these correlations, it appears that the IE scales measure a generally favorable attitude toward the disabled in general. As will become clear in the following section, the subjects tending to have more favorable attitudes toward the disabled (as measured by the Social Distance Survey) tend to view the disabled as more internally motivated. This favorable attitude appears to coincide with a higher degree of course work in Special Education and Rehabilitation.

Treatment Sub-Scales (TRB)

The relationship between the Treatment sub-scales and the ATDP and the IE sub-scales has already been discussed. The other variables to which this sub-scale relates significantly as shown in Table VI are the Dd and Db sub-scales of the Social Distance Survey. The correlations between the Treatment sub-scales and the Dd and Db scales were .32 and .24, respectively. This tends to indicate that the TRB sub-scale relates to a favorable-unfavorable dimension of attitudes toward the

disabled. The fact that it correlates positively with the IE scale, but does not correlate with the SC scales, would indicate that this favorable quality of attitude is also related to some degree of respect for the disabled person's internal drive and motivations.

The Discredited (Dd) and Discreditable (Db) Sub-scales of the Social Distance Survey

Examination of Table VI will reveal that these are positively correlated with the ATDP, the IE scales, the TRB scales and with each other (.71). The Db scale is negatively related to the SC sub-scales. This would indicate that these scales are related to a favorable attitude toward the disabled, but the negative relationship between the Db sub-scale and the SC sub-scales indicates that the Db sub-scale taps attitudes toward somewhat less socially desirable categories and that such categories are perceived by some persons as less deserving of special considerations otherwise to be extended more "deserving" disabled individuals.

Summary of Intercorrelations of the Sub-Scales of the Disability Opinion Survey, the Social Distance Survey and Other Variables

In summation, the six sub-scales of the DOS and the SDS measure discrete dimensions of attitude toward the disabled. The IE sub-scales of the Disability Opinion Survey appear to measure an attitude of respect for the disabled in the sense that they are perceived responsible for their own destinies.

The SC sub-scales, on the other hand, appear to be measuring a degree of <u>compassion</u> for the disabled who have "socially acceptable" disabilities. The Dd and the Db sub-scales measure a general degree of <u>acceptance</u> of the disabled.

## ANALYSIS AND INTERPRETATION OF THE RESULTS OF THE ONE-WAY ANALYSIS OF VARIANCE BETWEEN THE SIX SUB-SCALES OF THE DISABILITY OPINION SURVEY AND THE SOCIAL DISTANCE SURVEY AND OTHER VARIABLES

Tables VIIa through VIIj contain the results on the analyses of variance for the four groups in this study. It should be remembered that the in-service group, for the purpose of designation, was assigned the number, 1000. The other groups were assigned their actual course number; SPER 3401 represents an undergraduate introduction course to children with learning disabilities. SPER 3901 represents an undergraduate course in the introduction to rehabilitation and SPER 7000 represents an introduction to Special Education at the graduate level. The results of this analysis will be discussed in the order of variables studied.

### Age

Table VIIa presents the results of an analysis of variance of the four groups in regard to chronological age. As is seen, the groups were very significantly different in regard to this variable. The in-service group and the introductory graduate class were much older than the two undergraduate classes.

### Hours in Special Education and Rehabilitation

Table VIIb contains the results of the analysis of variance for the four groups in regard to credit hours in

TABLE VIIa

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE VARIABLE OF AGE

| | Mean Square | f | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 637.48 | 3 | 9.52 | .000 |
| Within | 66.95 | 212 | | |

| Groups | N | Mean Age |
|---|---|---|
| 1000 | 99 | 30.31 |
| 3401 | 40 | 24.65 |
| 3901 | 31 | 25.19 |
| 7000 | 46 | 32.41 |

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TABLE VIIb

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE VARIABLE OF HOURS IN SPECIAL EDUCATION AND REHABILITATION

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 390.95 | 3 | 4.11 | .006 |
| Within | 93.64 | 212 | | |

| Groups | N | Mean Hours |
|---|---|---|
| 1000 | 99 | 6.05 |
| 3401 | 40 | 12.30 |
| 3901 | 31 | 9.03 |
| 7000 | 46 | 7.24 |

TABLE VIIc

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE ATTITUDE TOWARD DISABLED PERSONS SCALE

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 133.33 | 3 | .35 | .79 |
| Within | 381.88 | 212 | | |

| Groups | N | Mean ATDP Score |
|---|---|---|
| 1000 | 99 | 120.65 |
| 3401 | 40 | 119.82 |
| 3901 | 31 | 116.90 |
| 7000 | 46 | 121.15 |

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TABLE VIId

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE SPECIAL CONSIDERATION SCALE OF THE DISABILITY OPINION SURVEY (FORM IS)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 1870.36 | 3 | 19.77 | .000 |
| Within | 95.57 | 212 | | |

| Groups | N | Mean Special Consideration Score |
|---|---|---|
| 1000 | 99 | 48.41 |
| 3401 | 40 | 38.22 |
| 3901 | 31 | 38.67 |
| 7000 | 46 | 37.84 |

TABLE VIIe

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE SPECIAL CONSIDERATION SCALE OF THE
DISABILITY OPINION SURVEY (FORM IST)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 1246.68 | 3 | 16.68 | .000 |
| Within | 74.70 | 212 | | |

| Groups | N | Mean Special Consideration Score |
|---|---|---|
| 1000 | 99 | 47.54 |
| 3401 | 40 | 38.29 |
| 3901 | 31 | 40.93 |
| 7000 | 46 | 39.15 |

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TABLE VIIf

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE INTERNAL-EXTERNAL SCALE OF THE
DISABILITY OPINION SURVEY (FORM IS)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 5236.87 | 3 | 83.95 | .000 |
| Within | 62.37 | 212 | | |

| Groups | N | Mean Internal-External Score |
|---|---|---|
| 1000 | 99 | 30.93 |
| 3401 | 40 | 48.79 |
| 3901 | 31 | 47.35 |
| 7000 | 46 | 47.82 |

TABLE VIIg

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE INTERNAL-EXTERNAL SCALE OF THE
DISABILITY OPINION SURVEY (FORM IST)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 3028.25 | 3 | 46.89 | .000 |
| Within | 64.57 | 212 | | |

| Groups | N | Mean Internal-External Score |
|---|---|---|
| 1000 | 99 | 34.20 |
| 3401 | 40 | 47.03 |
| 3901 | 31 | 46.25 |
| 7000 | 46 | 47.57 |

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TABLE VIIh

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE TREATMENT SCALE OF THE
DISABILITY OPINION SURVEY (FORM IST)

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 87.25 | 3 | 3.56 | .01 |
| Within | 24.50 | 212 | | |

| Groups | N | Mean Treatment Score |
|---|---|---|
| 1000 | 99 | 51.35 |
| 3401 | 40 | 53.82 |
| 3901 | 31 | 52.12 |
| 7000 | 46 | 54.17 |

TABLE VIIi

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE DISCREDITED (Dd) SCALE OF THE
SOCIAL DISTANCE SURVEY

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 689.58 | 3 | 8.13 | .000 |
| Within | 84.74 | 212 | | |

| Groups | N | Mean Discredited Score |
|---|---|---|
| 1000 | 99 | 2.71 |
| 3401 | 40 | 3.53 |
| 3901 | 31 | 3.14 |
| 7000 | 46 | 3.13 |

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TABLE VIIj

AN ANALYSIS OF VARIANCE BETWEEN FOUR GROUPS
ON THE DISCREDITABLE (Db) SCALE OF THE
SOCIAL DISTANCE SURVEY

| | Mean Square | df | F-Ratio | Probability |
|---|---|---|---|---|
| Between | 1064.62 | 3 | 13.74 | .000 |
| Within | 77.46 | 212 | | |

| Groups | N | Mean Discreditable Score |
|---|---|---|
| 1000 | 99 | 2.15 |
| 3401 | 40 | 3.10 |
| 3901 | 31 | 2.93 |
| 7000 | 46 | 2.58 |

Special Education and Rehabilitation. Here it can be seen that the undergraduate classes had significantly more hours in special training than had the other two groups. This will be interesting to remember in interpreting some of the other findings to be discussed.

Attitude Toward Disabled Person

Table VIIc contains the results of the analysis of variance for the four groups on the ATDP scale. There were no significant differences between the four groups on this instrument. This is most interesting in light of the fact that significant differences, as will be shown, were found between these groups on the instruments being standardized. More will be said in this regard later in this section.

Special Consideration Scales, Disability Opinion Survey (Both Forms)

Tables VIId and VIIe contain the results of the analysis of variance between the four groups on the Special Consideration scales. As is readily apparent, the in-service group is significantly different from the other groups. If it is remembered that the higher the score, the less prone the person is to extend special considerations to the disabled, it is obvious that the in-service group tended to take a more "hard nosed" attitude in this regard. This difference was significant and in the same direction on both Forms IS and IST.

Internal-External Scales

The results of the analysis of variance between the four groups on the Internal-External scales of both forms of the Disability Opinion Survey are contained in Tables VIIf and g. Again, there is a significant difference between the in-service group and the classes which are in the same direction on both forms of the DOS. The higher the score, the more the subject tends to perceive the disabled as being internally motivated. Therefore, it is readily apparent that the in-service group tended to view the disabled as more externally motivated than did the classes. This becomes doubly interesting when it is considered that on the Special Consideration scales the in-service group tended to be more "hard nosed" in extending special favors. Could it be that the less trained individuals tend to put the disabled in a double-bind? That is, viewing their motivation as dependent more on external circumstances, but at the same time being reluctant to make external circumstances easier for them to overcome their problems. These results support this hypothesis.

Treatment Scale, Disability Opinion Survey (Form IST)

Table VIIh contains the results of the analysis of variance between the four groups on the Treatment sub-scale of the Disability Opinion Survey (Form IST). A significant difference between the four groups was found, although the

significance of the difference was not as low a probability as the other differences, being at the .01 level. In examining the patterns of the means in Table VIIh, it can be seen that the classes tended to have higher mean scores (meaning a more positive attitude toward the effectiveness of treatment). This particular finding is interesting in the light of this scale's correlation with the ATDP. Although the Treatment scale correlates high and positively with the ATDP and also, there were no significant differences found between the four groups in regard to their scores on the ATDP, a significant difference was found in the Treatment scale. This may indicate that although the Treatment scale does measure a general favorable-unfavorable dimension of attitude toward the disabled, it is more sensitive in its measurement than the ATDP.

The Discredited and Discreditable Scale, the Social Distance Survey

Tables VIIi and VIIj contain the results of the analysis of variance between the four groups in reference to their scores on the Social Distance Survey. Examination of these tables reveals significant differences between the groups on both sub-scales. The in-service group had the lowest mean on both sub-scales, indicating they were less comfortable around the disabled, particularly persons having discreditable (hidden) disabilities. It is of interest to note that all groups had lower mean scores for the discreditable sub-scale

than they did for the discredited. Again, however, the classes in training did express more acceptance of the disabled in social situations.

## SUMMARY OF CURRENT RESULTS

This report has reviewed the initial work in standardizing newly developed measures of attitudes toward disabled persons. These measures are the Disability Opinion Survey (Forms IS and IST) and the Social Distance Survey. The research findings presented lead to the following preliminary conclusions:

1. The Internal-External scale of the Disability Opinion Survey measures the degree of respect the subject holds for the internal motivations of disabled persons. Subjects having more professional training in working with disabled persons tend to score toward the internal end of the internal-external continuum.

2. The Special Consideration scale of the Disability Opinion Survey measures the tendency of the subject to extend special considerations to disabled persons. Subjects having had more professional training in working with disabled persons tend to score "toward the middle of the road", but leaning ever so slightly toward the more lenient side of the "middle".

3. The Treatment scale of the Disability Opinion Survey tends to tap the subject's view of the effectiveness of rehabilitation programs for the disabled. Subjects with more professional training in working with the disabled appear to be more positive in their view of such programs than are lesser trained individuals.

4. The Discredited scale of the Social Distance Survey appears to measure the subject's acceptance of persons with obvious "stigmas", not necessarily disabilities, but such things as being a member of a minority group. Subjects with more professional training appear to be much more accepting of such groups than relatively untrained subjects.

5. The Discreditable scale of the Social Distance Survey proved to be somewhat of an enigma, in that it sometimes revealed relationships to other variables that were difficult to explain. All in all, however, this scale has proven to be somewhat of a "clincher" as far as discerning accepting attitudes. This statement is based on the fact that the disability categories contained in this scale are those which are not of the "socially acceptable" type and subjects scoring high on this scale tend to score extremely favorable on the other scales.

The Disability Opinion Survey (Forms IS and IST) and the Social Distance Survey appear to have much promise in measuring affective dimensions in persons intending to work professionally with the disabled. These instruments, however, should be viewed as tools for measuring training effectiveness rather than any kind of screening instruments. In their present form, these instruments are extremely experimental and any attempt to use them for anything but measures of training effectiveness for groups would be irresponsible.

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# APPENDIX A

## ORIGINAL FORCED-CHOICE FORMS OF THE DISABILITY OPINION SURVEY

DISABILITY OPINION SURVEY FORM A



Directions: Please circle the statement in each item that you agree with most. You may not agree with either statement, but circle the item you agree with most.

1. a. The number of physically disabled people far outnumber the mentally disabled persons in the United States.
   b. The number of mentally disabled people far outnumber the number of physically disabled people in the United States.

2. a. Most disabled people can "make their way in the world" if they just take advantage of the opportunities and programs available to them.
   b. Most disabled people have a very difficult time "making their way in the world" because of prejudicial barriers, lack of adequate opportunities, etc.

3. a. The burden of teaching an individual with a lower limb amputation to use a prosthetic limb should rest primarily on the rehabilitation team, i.e., physician, physical therapist, rehabilitation counselor, etc.
   b. Learning to use a prosthetic limb is as much or more the responsibility of the amputee as it is the rehabilitation team.

4. a. The general public will accept for the most part a person who has sustained a heart attack.
   b. The general public will not for the most part accept a person who has sustained a heart attack.

5. a. To make a realistic adjustment to the everyday world, a physically handicapped person should be given little or no special consideration as far as normal expectations are concerned.
   b. To make a realistic adjustment to the everyday world, many special considerations must be given to accommodate the physically handicapped person.

6. a. The "true" alcoholic cannot help himself but must be rehabilitated by trained professionals.
   b. The "true" alcoholic must first want to be rehabilitated before any outside help will be effective.

7. a. How well a physically disabled child does in later life really depends on whether or not he has access to a special education program.
   b. How well a physically handicapped child does later in life really depends on his own motivation, personality, and abilities.

8. a. The prejudice to the mentally retarded is tremendous.
   b. The prejudice toward the mentally disturbed is tremendous.

9. a. No matter what an ex-mental patient does, the odds are really against his adjustment to the world outside a mental hospital.
   b. An ex-mental patient can adjust to the outside world if he really tries and is well motivated.

10. a. A person paralyzed from the waist down and confined to a wheelchair has to cope with so many problems that their emotionality should be tolerated more readily.
    b. Everyone is exposed to psychological stress, therefore a person paralyzed from the waist down and confined to a wheelchair must learn to cope with their emotions and keep them in check.

11. A non-disabled woman who marries a man partially paralized by polio should be extremely tolerant and patient.
    b. A non-disabled woman who marries a man partially paralyzed by polio should not be expected to be any more tolerant or patient than any other wife.

12. a. More physically disabled adults are married.
    b. More mentally retarded adults are married.

13. a. A vocational rehabilitation counselor should be ready to go to any lengths to help rehabilitate a disabled person.
    b. A vocational rehabilitation counselor can do just so much and then it is up to the disabled person to assist in his rehabilitation.

14. a. A vocational rehabilitation counselor should always find a job for the mentally retarded clients with whom he works.
    b. Mentally retarded clients of vocational rehabilitation are often very capable of finding their own jobs once they are trained.

15. a. Gifted individuals are so far ahead of the rest of us that their eccentricities should be tolerated.
    b. Even gifted persons have a certain responsibility to meet society's demands.

16. a. If a vocational rehabilitation counselor and a client with arrested tuberculosis work out a realistic vocational plan, there is a great likelihood that such a client can be rehabilitated and become a contributing member to society.
    b. If a vocational rehabilitation counselor and a client with arrested tuberculosis work out a realistic vocational plan, no matter how realistic the plan is, it will be extremely difficult to carry out due to the fears and aversions of potential employers, co-workers, and the general public.

17. a. Heart attacks constitute the Number 1 disabler of the middle age population.
    b. Disability resulting from automobile accidents constitute the Number 1 disabler of the middle age population.

18. a. If a college professor has an individual with cerebral palsy in his class, he should make little or no special allowances for such an individual as far as class assignments, tests, final exams, etc., are concerned.
    b. A college professor with an individual with cerebral palsy in his class should make any and all allowances possible for such an individual as far as class assignments, tests, final exams, etc., are concerned.

19. a. Elderly persons who live alone are usually lonely because they have been forgotten or neglected by family, friends, and society in general.
    b. Elderly persons who live alone do not have to be lonely if they make efforts to find companionship.

20. a. Most mildly retarded individuals who lose their jobs, lose them mainly because of employer and co-worker prejudices.
    b. Most mildly retarded individuals who lose their jobs, lose them because of faulty behavioral patterns displayed on the job.

21. a. Alcoholism is the largest drug problem in the United States.
    b. The use of "hard" drugs such as heroin is the largest drug problem in the United States.

22. a. Many of the factors contributing to the successful adjustment of an individual with epilepsy are due to good luck, special circumstances, etc.
    b. The factors contributing to the successful adjustment of an individual with epilepsy are his abilities, personality, and educational background.

23. a. Even though a person with polio might secure employment, he will probably never achieve a position of real leadership because of prejudice.
    b. An individual with polio who secures employment will probably achieve as much leadership as a non-disabled individual with comparable talents, abilities, and personality traits.

24. a. The major cause of mental retardation is heredity.
    b. The major cause of mental retardation is environmental factors.

25. a. Many marriages of amputees end in divorce because of negative personality traits not directly due to the fact of amputation.
    b. Many marriages of amputees end in divorce because of the lack of understanding on the part of the amputee's spouse.

26. a. If a physically disabled person works hard and achieves great accomplishments, he will receive as much respect as a non-disabled person achieving comparable accomplishments.

b. No matter what the accomplishments of a physically disabled person might be, he will never achieve the same degree of respect as that of a non-disabled person with comparable achievements because most people will believe the disabled person "got where he is" due to special opportunities, breaks, etc.

# DISABILITY OPINION SURVEY FORM B

**Directions:** For each pair of statements, select the one which more closely represents your belief. Do not mark on this scale; place an X through the appropriate letter on the answer sheet.

1. a. The number of severely disabled heart patients far outnumber the number of mentally retarded persons in the United States.
   b. The number of mentally retarded individuals far outnumber the number of severely disabled heart patients in the United States.

2. a. Most mentally retarded persons can "make their way in the world" if they just take advantage of the opportunities and programs available to them.
   b. Most mentally retarded persons have a very difficult time "making their way in the world" because of prejudice, lack of adequate opportunities, etc.

3. a. Once a person becomes physically disabled, his rehabilitation is mainly a function of his own motivations, desires and ambitions.
   b. Once a person becomes physically disabled, his rehabilitation is mainly a function of the adequacy of the medical care he receives, the effectiveness of the professional rehabilitation team, and the therapy he receives.

4. a. Most people who have heart attacks would probably have them inevitably no matter how overly motivated they might be.
   b. Most people who have heart attacks probably drive themselves too hard.

5. a. Most people who have "nervous breakdowns" have them because they take things too seriously and lose control over emotions.
   b. Most people who have "nervous breakdowns" have them because environmental pressures and stresses become too great for them to handle.

6. a. The general public, for the most part, will accept a person who has diabetes.
   b. The general public, for the most part, will not accept a person who has diabetes.

7. a. To make a realistic adjustment to the everyday world, a physically handicapped person should be given little or no special consideration as far as normal expectations are concerned.
   b. To make a realistic adjustment to the everyday world, many special considerations must be given to accommodate the physically handicapped person.

8. a. An alcoholic becomes that way because he loses control over his own drinking behavior.
   b. An alcoholic many times becomes that way because of the environmental stresses to which he is subjected.

9. a. The odds against an ex-mental patient becoming truly rehabilitated are very great due to public prejudice and other injustices.
   b. The ex-mental patient has about as great a chance of being rehabilitated as any other disabled person, if he has sufficient ego strength and the right motivations.

10. a. Most people disabled by accidents are disabled because most such accidents are unavoidable.
    b. Most people disabled by accidents are disabled largely due to their own carelessness.

11. a. A person disabled by severe burns over a large portion of their body has to copie with so many problems that their emotional outbursts should be tolerated more readily.
    b. Everyone is exposed to a certain degree of psychological stress, therefore, a person disabled by severe burns over a large portion of their body must learn to cope with their emotions and keep them in check.

12. a. A non-disabled man who marries a woman with polio should be extremely tolerant and patient.
    b. A non-disabled man who marries a woman with polio should not be expected to be any more tolerant or patient than any other husband.

13. a. Professional people who work to rehabilitate the disabled should be ready to go to any lengths to help a disabled person.
    b. Professional people who work with the disabled can do just so much and then it is up to the disabled person to assist in his own rehabilitation.

14. a. More physically disabled adults are married.
    b. More mentally retarded adults are married.

15. a. Gifted children should be taught to conform to the general expectations of society in order to achieve a certain degree of personal adjustment.
    b. Gifted children usually achieve a substantial degree of personal adjustment anyway, therefore, many times attempts to make them conform may tend to squelch their potential.

16. a. A person who has completely recovered from tuberculosis will probably experience no difficulty becoming completely rehabilitated.
    b. A person who has completely recovered from tuberculosis will probably experience great difficulty in becoming rehabilitated due to prejudice, lack of understanding, and narrow-minded employers.

17. a. A person who "gets into drugs pretty heavy" does so usually due to the stresses and hypocrises in society.
    b. A person who "gets into drugs pretty heavy" does so due to his own personality weaknesses.

18. a. A college professor who has a student in his class who has been paralyzed by an automobile accident should make no special allowances for such a student as far as class assignments, tests, final exams, etc. are concerned.
    b. A college professor who has a student in his class who has been paralyzed by an automobile accident should make any and all allowances possible for such a student as far as class assignments, tests, final exams, etc. are concerned.

19. a. Disabled people who live alone are usually lonely because they have been forgotten or neglected by family, friends, and society in general.
    b. Disabled people who live alone do not have to be lonely if they make efforts to find companionship.

20. a. Most physically handicapped employees who lose their jobs lose them mainly because of faulty behavioral patterns displayed on the job.
    b. Most physically handicapped employees who lose their jobs lose them mainly because of employer and co-worker prejudices.

21. a. Successful rehabilitation of the epileptic is usually due to their own skills and abilities.
    b. Successful rehabilitation of the epileptic is usually a matter of good fortune and luck.

22. a. Even though a double amputee might secure employment, he will probably never achieve a position of real leadership because of prejudice against the disabled.
    b. A double amputee who secures employment will probably achieve as much leadership as a non-disabled person with comparable talents, abilities, and personality traits.

23. a. Many marriages involving persons confined to a wheelchair and in divorce due to negative personality traits not directly due to the fact of their disability.
    b. Many marriages of persons confined to wheelchairs end in divorce due to the lack of understanding on the part of the disabled person's spouse.

24. a. A successfully rehabilitated handicapped person who works hard will probably receive as much respect as a non-disabled person who is hard working.
    b. No matter what the accomplishments of a successfully rehabilitated handicapped person, he will never achieve the same degree of respect as that of a non-disabled individual with comparable achievements because most people will believe the handicapped person "got where he is" due to special opportunities, lucky breaks, etc.

# APPENDIX B

## SOCIAL DISTANCE SURVEY AND SCORING PROCEDURES

SCORING INSTRUCTIONS FOR THE SOCIAL DISTANCE SURVEY

The Social Distance Survey is scored for two categories, or scales. The first is the Discredited (Dd) scale. The number of the categories on this scale (see the following sample scale) are:

Numbers 1, 2, 9, 13, and 14

The number of the categories on the Discreditable (Db) scale are:

Numbers 3, 5, 6, 7, 8, and 10

The value assigned to each of the relationships is shown at the top of each column on the accompanying answer sheet. The values range from 1, for "Live in the same neighborhood" to 5 for "Would consider marriage with such an individual."

To obtain a score for the Discredited (Dd) scale, sum the values of the ratings for the five discredited categories and divide that sum by five. This yields an average score for the discredited categories.

To obtain a score for the Discreditable (Db) scale, sum the values of the ratings for the six discreditable categories and divide that sum by six. This yields an average score for the discreditable categories.

Note: Numbers 4, 11 and 12 are omitted from either scale. Number 4, "Mental retardate", was omitted due to the fact that some persons might conceive mental retardation as an obvious disability, while others might conceive it as unobvious. Numbers 11 and 12 were omitted due to the implied sex bias.

SOCIAL DISTANCE SURVEY

Instructions: Below are listed several types of persons. You are to indicate on the scale below the closest type of relationship you would feel comfortable in having with such persons.

| | Live in same Neighborhood | Next Door Neighbor | A Very Close Friend | Would Date Such An Individual | Would consider Marriage with Such an Individual |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| (Dd) 1. Member of Racial Minority | — | — | — | — | — |
| (Dd) 2. Physically Handicapped | — | — | — | — | — |
| (Db) 3. Ex-Convict | — | — | — | — | — |
| 4. Mental Retardate | — | — | — | — | — |
| (Db) 5. Ex-Mental Patient | — | — | — | — | — |
| (Db) 6. Diabetic | — | — | — | — | — |
| (Db) 7. Epileptic | — | — | — | — | — |
| (Db) 8. Homosexual | — | — | — | — | — |
| (Dd) 9. Amputee | — | — | — | — | — |
| (Db)10. Narcotic Addict | — | — | — | — | — |
| 11. Prostitute | — | — | — | — | — |
| 12. Unwed Mother | — | — | — | — | — |
| (Dd)13. Blind | — | — | — | — | — |
| (Dd)14. Deaf | — | — | — | — | — |

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# SOCIAL DISTANCE SURVEY

**Instructions:** Below are listed several types of persons. You are to indicate on the scale below the closest type of relationship you would feel comfortable in having with such persons.

| | Live in Same Neighborhood | Next Door Neighbor | A Very Close Friend | Would Date Such An Individual | Would Consider Marriage with Such an Individual |
|---|---|---|---|---|---|
| 1. Member of Racial Minority | X | | | | |
| 2. Physically Handicapped | | | X | | |
| 3. Ex-Convict | X | | | | |
| 4. Mental Retardate | | | | | |
| 5. Ex-Mental Patient | | | X | | |
| 6. Diabetic | | | | X | |
| 7. Epileptic | | | | X | |
| 8. Homosexual | X | | | | |
| 9. Amputee | | | | X | |
| 10. Narcotic Addict | X | | | | |
| 11. Prostitute | | | | | |
| 12. Unwed Mother | | | | | |
| 13. Blind | | | | | X |
| 14. Deaf | | | | | X |

Dd (1) - 1
(2) - 3
(9) - 4
(13) - 5
(14) - 5
18

$\frac{18}{5} = 3.6$

Db (3) - 1
(5) - 3
(6) - 4
(7) - 4
(8) - 1
(10) - 1
14

$\frac{14}{6} = 2.3$

$\frac{3.6}{2.3}$

# APPENDIX C

## ITEMS AND SCORING KEY FOR THE DISABILITY OPINION SURVEY (FORMS IS AND IST)

The following table contains the items on the Disability Opinion Survey, Forms IS and IST. The actual items will be found in the center of the table. To the left of each item is its corresponding number on Form IS and Form IST. As will be noted in the extreme left-hand column, the items presented in this table are grouped according to the sub-scale they comprise. To the right of each item will be found the scoring key for the extremes of each item. That is, each item on the actual answer sheet is on a six-point continuum. The numbers in the right-hand column of the accompanying table represent the extreme polar values assigned to each item continuum. For each sub-scale, then, the subject's responses are summed algebraically and a constant of 40 is added to this summed value. (The constant 40 is added in order to eliminate negative values.) This procedure is identical for all scales on both forms of the Disability Opinion Survey.

| Sub-Scale | Item # Form IS | Item # IST | Item | Scoring Key Agree Very Much | Scoring Key Disagree Very Much |
|---|---|---|---|---|---|
| Internal-External | 2. | 3. | A successfully rehabilitated handicapped person who works hard will probably receive as much respect as a non-disabled person who is hard working. | +3 | -3 |
| | 3. | 6. | Once a person becomes disabled, his rehabilitation is mainly a function of his own motivations, desires, and ambitions. | +3 | -3 |
| | 5. | 8. | Elderly persons who live alone do not have to be lonely if they make an effort to find companionship. | +3 | -3 |
| | 7. | 11. | If a physically handicapped person works hard and achieves great accomplishments, he will receive as much respect as a non-disabled person achieving comparable accomplishments. | +3 | -3 |
| | 9. | 14. | No matter what the accomplishments of a successfully rehabilitated handicapped person, he will never achieve the same degree of respect as that of a non-disabled individual with comparable achievements because most people will believe the handicapped person "got where he is" due to special opportunities, breaks, etc. | -3 | +3 |
| | 14. | 21. | Once a person becomes physically disabled, his rehabilitation is mainly a function of the adequacy of the medical care he receives, the effectiveness of the rehabilitation team, and the therapy he receives. | -3 | +3 |
| | 16. | 24. | Same as item #11 for cross-check purposes. | +3 | -3 |
| | 19. | 28. | Elderly persons who live alone are usually lonely because they have been forgotten or neglected by family, friends, and society in general. | -3 | +3 |

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| Sub-Scale Form | Item # IS | Item # IST | Item | Scoring Key: Agree Very Much | Scoring Key: Disagree Very Much |
|---|---|---|---|---|---|
| Special Considerations | 1. | 1. | A non-disabled woman who marries a man partially paralyzed by polio should be extremely tolerant. | -3 | +3 |
| | 4. | 5. | A person disabled by severe burns over a large portion of his body has to cope with so many problems that his emotional outbursts should be tolerated more readily. | -3 | +3 |
| | 6. | 9. | A non-disabled man who marries a woman with polio should not be expected to be any more tolerant than any other husband. | +3 | -3 |
| | 8. | 12. | A college professor with an individual with cerebral palsy in his class should make any and all allowances for such an individual as far as class assignments, tests, final exams, etc. are concerned. | -3 | +3 |
| | 10. | 17. | To make a realistic adjustment to the everyday world, a physically disabled person should be given little or no special consideration as far as normal expectancies are concerned. | -3 | +3 |
| | 13. | 20. | Everyone is exposed to a certain degree of psychological stress; therefore, a person disabled by severe burns over a large portion of his body must learn to cope with his emotions and keep them in check. | +3 | -3 |
| | 15. | 23. | A non-disabled man who marries a woman with polio should be extremely tolerant and patient. | -3 | +3 |
| | 17. | 26. | A college professor who has a student in his class who has been paralyzed by an automobile accident should make any and all allowances possible for such a student as far as class assignments, tests, final exams, etc. are concerned. | -3 | +3 |

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| Sub-Scale Form | Item # IS | Item # IST | Item | Scoring Key: Agree Very Much | Scoring Key: Disagree Very Much |
|---|---|---|---|---|---|
| Special Considerations (continued) | 20. | 29. | A non-disabled woman who marries a man partially paralyzed by polio should not be expected to be any more tolerant or patient than any other wife. | +3 | -3 |
| | 18. | 30. | If a college professor has an individual with cerebral palsy in his class, he should make little or no special allowances for such an individual as far as class assignments, tests, final exams, etc. are concerned. | +3 | -3 |
| Treatment | | 7. | Most physically disabled persons can be trained to make some type of positive contribution society. | +3 | -3 |
| | | 10. | Few physically disabled persons can be trained to make a positive contribution to society. | -3 | +3 |
| | | 13. | Money spent in developing rehabilitation programs for the mentally retarded is really wasted from society's point of view due to the few successful cases rehabilitated. | -3 | +3 |
| | | 15. | Funding rehabilitation programs for the mentally retarded is really money well invested from society's point of view since it makes so many taxpayers out of tax consumers. | +3 | -3 |
| | | 16. | Money spent on rehabilitation programs for the physically disabled and the mentally retarded should really be reduced and directed toward purposes more beneficial to society. | -3 | +3 |
| | | 22. | Money spent on rehabilitation programs for the physically disabled and the mentally retarded should be increased by diverting funds from programs less beneficial to society. | +3 | -3 |

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| Sub-Scale Form | Item # IS | Item # IST | Item | Scoring Key Agree Very Much | Scoring Key Disagree Very Much |
|---|---|---|---|---|---|
| Treatment (continued) | | 25. | A successfully rehabilitated physically or mentally handicapped person usually makes a better than average employee as far as absenteeism, accidents and dependability are concerned. | +3 | -3 |
| | | 27. | Despite an apparently successful rehabilitation process, physically or mentally handicapped persons usually have a great deal of difficulty keeping jobs due to absenteeism, accidents and undependability. | -3 | +3 |

Note (1): Items 2 and 4 of Form IST were originally designed to be part of the Treatment sub-scale, but were judged to be so complex and contaminated by knowledge that they are excluded from the scoring of this scale. However, they were left in the instrument to serve as filler items.

Note (2): Copies of the items on the actual forms and accompanying answer sheets are available from the authors on request.

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# APPENDIX D

## PERCENTILE NORMS FOR THE SUB-SCALES OF THE DISABILITY OPINION SURVEY (FORMS IS AND IST) AND THE SOCIAL DISTANCE SURVEY

PERCENTILE NORMS FOR THE SPECIAL CONSIDERATION SCALE
OF THE DISABILITY OPINION SURVEY (FORM IS)
N = 216

| Raw Score | Percentile |
|---|---|
| 23 | 5 |
| 28 | 10 |
| 32 | 15 |
| 33 | 20 |
| 36 | 25 |
| 38 | 30 |
| 39 | 35 |
| 40 | 40 |
| 42 | 45 |
| 44 | 50 |
| 45 | 55 |
| 47 | 60 |
| 48 | 65 |
| 49 | 70 |
| 51 | 75 |
| 52 | 80 |
| 53 | 85 |
| 55 | 90 |
| 57 | 95 |
| 62 | 99 |

PERCENTILE NORMS FOR THE INTERNAL-EXTERNAL SCALE
OF THE DISABILITY OPINION SURVEY (FORM IS)
N = 216

| Raw Score | Percentile |
|---|---|
| 19 | 5 |
| 23 | 10 |
| 25 | 15 |
| 28 | 20 |
| 30 | 25 |
| 33 | 30 |
| 36 | 35 |
| 38 | 40 |
| 40 | 45 |
| 42 | 50 |
| 44 | 55 |
| 45 | 60 |
| 47 | 65 |
| 48 | 70 |
| 49 | 75 |
| 51 | 80 |
| 52 | 85 |
| 54 | 90 |
| 56 | 95 |
| 59 | 99 |

PERCENTILE NORMS FOR THE SPECIAL CONSIDERATION SCALE OF THE DISABILITY OPINION SURVEY (FORM IST)
N = 216

| Raw Score | Percentile |
|---|---|
| 26 | 5 |
| 30 | 10 |
| 31 | 15 |
| 34 | 20 |
| 37 | 25 |
| 38 | 30 |
| 40 | 35 |
| 41 | 40 |
| 43 | 45 |
| 45 | 50 |
| 46 | 55 |
| 47 | 60 |
| 48 | 65 |
| 49 | 70 |
| 50 | 75 |
| 51 | 80 |
| 52 | 85 |
| 54 | 90 |
| 56 | 95 |
| 60 | 99 |

PERCENTILE NORMS FOR THE INTERNAL-EXTERNAL SCALE OF THE DISABILITY OPINION SURVEY (FORM IST)
N = 216

| Raw Score | Percentile |
|---|---|
| 23 | 5 |
| 27 | 10 |
| 29 | 15 |
| 31 | 20 |
| 32 | 25 |
| 35 | 30 |
| 37 | 35 |
| 38 | 40 |
| 40 | 45 |
| 41 | 50 |
| 42 | 55 |
| 44 | 60 |
| 46 | 65 |
| 47 | 70 |
| 49 | 75 |
| 50 | 80 |
| 52 | 85 |
| 54 | 90 |
| 57 | 95 |
| 59 | 99 |

PERCENTILE NORMS FOR THE TREATMENT SCALE
OF THE DISABILITY OPINION SURVEY (FORM IST)
N = 216

| Raw Score | Percentile* |
|---|---|
| 43 | 5 |
| 46 | 10 |
| 47 | 15 |
| 48 | 20 |
| 49 | 25 |
| 50 | 30 |
| 51 | 35 |
| 52 | 45 |
| 53 | 55 |
| 54 | 65 |
| 55 | 75 |
| 56 | 80 |
| 58 | 90 |
| 62 | 99 |

*This distribution was extremely skewed; therefore the percentile figures are not normally distributed.

PERCENTILE NORMS FOR THE DISCREDITED SCALE
OF THE SOCIAL DISTANCE SURVEY
N = 216

| Raw Score | Percentile |
|---|---|
| 1.3 | 5 |
| 1.8 | 10 |
| 2.1 | 15 |
| 2.2 | 20 |
| 2.3 | 25 |
| 2.4 | 30 |
| 2.6 | 35 |
| 2.8 | 40 |
| 3.0 | 55 |
| 3.1 | 60 |
| 3.3 | 65 |
| 3.4 | 75 |
| 3.8 | 80 |
| 4.2 | 85 |
| 4.6 | 95 |
| 4.8 | 99 |

PERCENTILE NORMS FOR THE DISCREDITABLE SCALE
OF THE SOCIAL DISTANCE SURVEY
N = 216

| Raw Score | Percentile |
|---|---|
| 1.0 | 5 |
| 1.2 | 10 |
| 1.4 | 15 |
| 1.5 | 20 |
| 1.8 | 25 |
| 2.0 | 30 |
| 2.1 | 35 |
| 2.2 | 40 |
| 2.3 | 50 |
| 2.5 | 55 |
| 2.8 | 60 |
| 3.0 | 70 |
| 3.3 | 80 |
| 3.6 | 85 |
| 4.0 | 90 |
| 4.2 | 95 |
| 4.4 | 99 |